

In the Claims

1. (Currently amended) A computer-implemented system for associating target data with a product classification schema, the system comprising a data association module operable to:

access ~~the~~ a first product classification schema, the first schema comprising a taxonomy comprising a hierarchy of classes into which products may be categorized, the first schema further comprising ontologies associated with one or more of the classes, each ontology comprising one or more product attributes;

access ~~the~~ target data to be associated with the first schema, the target data organized according to a second product classification schema;

determine one or more classes of the first schema with which at least a portion of the target data should be associated based on a an automatic comparison, without translating the target data from the second schema to the first schema, between the target data and the product attributes of the ontologies of the first schema or between the target data and values for one or more of the product attributes of the ontologies of the first schema; and

associate the at least a portion of the target data with one or more classes of the first schema in response to determining, based on the automatic comparison, the one or more classes of the first schema with which the at least a portion of the target data should be associated.

2. (Currently amended) The system of Claim 1, wherein determining one or more classes of the first schema with which the at least a portion of the target data should be associated comprises identifying a portion of the target data including the name or an equivalent name of a product attribute included in the ontologies of these one or more classes of the first schema.

3. (Currently amended) The system of Claim 1, wherein determining one or more classes of the first schema with which the at least a portion of the target data should be associated comprises identifying a portion of the target data including values that match or are similar to values for a product attribute included in the ontologies of these one or more classes of the first schema.

1           4.       (Currently amended) The system of Claim 1, wherein determining one or more  
2 classes of the first schema with which the at least a portion of the target data should be  
3 associated comprises identifying a portion of the target data including a range of values that  
4 matches or is similar to a range of values for a product attribute included in the ontologies of  
5 these one or more classes of the first schema.

1           5.       (Currently amended) The system of Claim 1, wherein determining one or more  
2 classes of the first schema with which the at least a portion of the target data should be  
3 associated comprises identifying a portion of the target data including symbols that match or  
4 are similar to symbols associated with values for a product attribute included in the  
5 ontologies of these one or more classes of the first schema.

1           6.       (Currently amended) The system of Claim 1, wherein determining one or more  
2 classes of the first schema with which the at least a portion of the target data should be  
3 associated comprises identifying a portion of the target data having formatting that matches  
4 or is similar to formatting of values for a product attribute included in the ontologies of these  
5 one or more classes of the first schema.

1           7.       (Currently amended) The system of Claim 1, wherein determining one or more  
2 classes of the first schema with which the at least a portion of the target data should be  
3 associated comprises using vector space analysis to identify multiple portions of the target  
4 data including values that correspond to values for multiple product attributes included in the  
5 ontologies of these one or more classes of the first schema.

1           8.       (Currently amended) The system of Claim 1, wherein determining one or more  
2 classes of the first schema with which the at least a portion of the target data should be  
3 associated comprises using statistical correlation techniques to identify portions of the target  
4 data including values that correspond to values for a product attribute included in the  
5 ontologies of these one or more classes of the first schema.

1           9.       (Currently amended) The system of Claim 1, wherein the values for one or  
2 more of the product attributes of the ontologies of the first schema with which the target data  
3 may be compared are stored in one or more seller databases, the values in the seller databases  
4 being identified by one or more pointers associated with one or more classes of the first  
5 schema.

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10.       (Currently amended) The system of Claim 1, wherein associating the at least a  
portion of the target data with one or more classes of the first schema comprises associating  
one or more pointers to the target data with the one or more classes of the first schema.

1           11.       (Currently amended) The system of Claim 1, wherein associating the at least a  
2 portion of the target data with one or more classes of the first schema comprises associating  
3 one or more pointers to specific portions of the target data with one or more product attributes  
4 included in the ontology of the one or more classes of the first schema.

1           12.       (Currently amended) A method for associating target data with a product  
2 classification schema, comprising:

3           accessing ~~the~~ a first product classification schema, the first schema comprising a  
4 taxonomy comprising a hierarchy of classes into which products may be categorized, the first  
5 schema further comprising ontologies associated with one or more of the classes, each  
6 ontology comprising one or more product attributes;

7           accessing ~~the~~ target data to be associated with the first schema, the target data  
8 organized according to a second product classification schema;

9           determining one or more classes of the first schema with which at least a portion of  
10 the target data should be associated based on a an automatic comparison, without translating  
11 the target data from the second schema to the first schema, between the target data and the  
12 product attributes of the ontologies of the first schema or between the target data and values  
13 for one or more of the product attributes of the ontologies of the first schema; and

14           associating the at least a portion of the target data with one or more classes of the first  
15 schema in response to determining, based on the automatic comparison, the one or more  
16 classes of the first schema with which the at least a portion of the target data should be  
17 associated.

1           13.   (Currently amended) The method of Claim 12, wherein determining one or  
2 more classes of the first schema with which the at least a portion of the target data should be  
3 associated comprises identifying a portion of the target data including the name or an  
4 equivalent name of a product attribute included in the ontologies of these one or more classes  
5 of the first schema.

a 5 14.   (Currently amended) The method of Claim 12, wherein determining one or  
2 more classes of the first schema with which the at least a portion of the target data should be  
3 associated comprises identifying a portion of the target data including values that match or  
4 are similar to values for a product attribute included in the ontologies of these one or more  
5 classes of the first schema.

1           15.   (Currently amended) The method of Claim 12, wherein determining one or  
2 more classes of the first schema with which the at least a portion of the target data should be  
3 associated comprises identifying a portion of the target data including a range of values that  
4 matches or is similar to a range of values for a product attribute included in the ontologies of  
5 these one or more classes of the first schema.

1           16.   (Currently amended) The method of Claim 12, wherein determining one or  
2 more classes of the first schema with which the at least a portion of the target data should be  
3 associated comprises identifying a portion of the target data including symbols that match or  
4 are similar to symbols associated with values for a product attribute included in the  
5 ontologies of these one or more classes of the first schema.

1           17    (Currently amended) The method of Claim 12, wherein determining one or  
2 more classes of the first schema with which the at least a portion of the target data should be  
3 associated comprises identifying a portion of the target data having formatting that matches  
4 or is similar to formatting of values for a product attribute included in the ontologies of these  
5 one or more classes of the first schema.

1           18.   (Currently amended) The method of Claim 12, wherein determining one or  
2 more classes of the first schema with which the at least a portion of the target data should be  
3 associated comprises using vector space analysis to identify multiple portions of the target  
4 data including values that correspond to values for multiple product attributes included in the  
5 ontologies of these one or more classes of the first schema.

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2           19.   (Currently amended) The method of Claim 12, wherein determining one or  
3 more classes of the first schema with which the at least a portion of the target data should be  
4 associated comprises using statistical correlation techniques to identify portions of the target  
5 data including values that correspond to values for a product attribute included in the  
ontologies of these one or more classes of the first schema.

1           20.   (Currently amended) The method of Claim 12, wherein the values for one or  
2 more of the product attributes of the ontologies of the first schema with which the target data  
3 may be compared are stored in one or more seller databases, the values in the seller databases  
4 being identified by one or more pointers associated with one or more classes of the first  
5 schema.

1           21.   (Currently amended) The method of Claim 12, wherein associating the at least  
2 a portion of the target data with one or more classes of the first schema comprises associating  
3 one or more pointers to the target data with the one or more classes of the first schema.

1           22.   (Currently amended) The method of Claim 12, wherein associating the at least  
2 a portion of the target data with one or more classes of the first schema comprises associating  
3 one or more pointers to specific portions of the target data with one or more product attributes  
4 included in the ontology of the one or more classes of the first schema.

1           23. (Currently amended) Software for associating target data with a product  
2 classification schema, the software being embodied in a computer-readable medium and  
3 when executed operable to:

4           access ~~the~~ a first product classification schema, the first schema comprising a  
5 taxonomy comprising a hierarchy of classes into which products may be categorized, the first  
6 schema further comprising ontologies associated with one or more of the classes, each  
7 ontology comprising one or more product attributes;

8           access ~~the~~ target data to be associated with the first schema, the target data organized  
9 according to a second product classification schema;

10           determine one or more classes of the first schema with which at least a portion of the  
11 target data should be associated based on a an automatic comparison, without translating the  
12 target data from the second schema to the first schema, between the target data and the  
13 product attributes of the ontologies of the first schema or between the target data and values  
14 for one or more of the product attributes of the ontologies of the first schema; and

15           associate the at least a portion of the target data with one or more classes of the first  
16 schema in response to determining, based on the automatic comparison, the one or more  
17 classes of the first schema with which the at least a portion of the target data should be  
18 associated.

1           24. (Currently amended) The software of Claim 23, wherein determining one or  
2 more classes of the first schema with which the at least a portion of the target data should be  
3 associated comprises identifying a portion of the target data including the name or an  
4 equivalent name of a product attribute included in the ontologies of these one or more classes  
5 of the first schema.

1           25. (Currently amended) The software of Claim 23, wherein determining one or  
2 more classes of the first schema with which the at least a portion of the target data should be  
3 associated comprises identifying a portion of the target data including values that match or  
4 are similar to values for a product attribute included in the ontologies of these one or more  
5 classes of the first schema.

1           26.     (Currently amended) The software of Claim 23, wherein determining one or  
2 more classes of the first schema with which the at least a portion of the target data should be  
3 associated comprises identifying a portion of the target data including a range of values that  
4 matches or is similar to a range of values for a product attribute included in the ontologies of  
5 these one or more classes of the first schema.

1           27.     (Currently amended) The software of Claim 23, wherein determining one or  
2 more classes of the first schema with which the at least a portion of the target data should be  
3 associated comprises identifying a portion of the target data including symbols that match or  
4 are similar to symbols associated with values for a product attribute included in the  
5 ontologies of these one or more classes of the first schema.

1           28.     (Currently amended) The software of Claim 23, wherein determining one or  
2 more classes of the first schema with which the at least a portion of the target data should be  
3 associated comprises identifying a portion of the target data having formatting that matches  
4 or is similar to formatting of values for a product attribute included in the ontologies of these  
5 one or more classes of the first schema.

1           29.     (Currently amended) The software of Claim 23, wherein determining one or  
2 more classes of the first schema with which the at least a portion of the target data should be  
3 associated comprises using vector space analysis to identify multiple portions of the target  
4 data including values that correspond to values for multiple product attributes included in the  
5 ontologies of these one or more classes of the first schema.

1           30.     (Currently amended) The software of Claim 23, wherein determining one or  
2 more classes of the first schema with which the at least a portion of the target data should be  
3 associated comprises using statistical correlation techniques to identify portions of the target  
4 data including values that correspond to values for a product attribute included in the  
5 ontologies of these one or more classes of the first schema.

1           31.   (Currently amended) The software of Claim 23, wherein the values for one or  
2 more of the product attributes of the ontologies of the first schema with which the target data  
3 may be compared are stored in one or more seller databases, the values in the seller databases  
4 being identified by one or more pointers associated with one or more classes of the first  
5 schema.

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1           32.   (Currently amended) The software of Claim 23, wherein associating the at  
2 least a portion of the target data with one or more classes of the first schema comprises  
3 associating one or more pointers to the target data with the one or more classes of the first  
4 schema.

1           33.   (Currently amended) The software of Claim 23, wherein associating the at  
2 least a portion of the target data with one or more classes of the first schema comprises  
3 associating one or more pointers to specific portions of the target data with one or more  
4 product attributes included in the ontology of the one or more classes of the first schema.



1           34. (Currently amended) A system for associating target data with a product  
2 classification schema, the system comprising:

3           means for accessing ~~the~~ a first product classification schema, the first schema  
4 comprising a taxonomy comprising a hierarchy of classes into which products may be  
5 categorized, the schema further comprising ontologies associated with one or more of the  
6 classes, each ontology comprising one or more product attributes;

7           means for accessing ~~the~~ target data to be associated with the first schema, the target  
8 data organized according to a second product classification schema;

9           means for determining one or more classes of the first schema with which at least a  
10 portion of the target data should be associated based on a an automatic comparison, without  
11 translating the target data from the second schema to the first schema, between the target data  
12 and the product attributes of the ontologies of the first schema or between the target data and  
13 values for one or more of the product attributes of the ontologies of the first schema; and

14           means for associating the at least a portion of the target data with one or more classes  
15 of the first schema in response to determining, based on the automatic comparison, the one or  
16 more classes of the first schema with which the at least a portion of the target data should be  
17 associated.

1           35. (Currently amended) A computer-implemented system for associating target  
2 data with a product classification schema, the system comprising a data association module  
3 operable to:

4           access ~~the~~ a first product classification schema, the first schema comprising a  
5 taxonomy comprising a hierarchy of classes into which products may be categorized, the first  
6 schema further comprising ontologies associated with one or more of the classes, each  
7 ontology comprising one or more product attributes;

8           access ~~the~~ target data to be associated with the first schema, the target data organized  
9 according to a second product classification schema;

10           determine one or more classes of the first schema with which at least a portion of the  
11 target data should be associated based on a an automatic comparison, without translating the  
12 target data from the second schema to the first schema, between the target data and the  
13 product attributes of the ontologies of the first schema or between the target data and values  
14 for one or more of the product attributes of the ontologies of the first schema, the values  
15 being stored in one or more seller databases and identified by one or more pointers associated  
16 with one or more classes of the first schema; and

17           associate the at least a portion of the target data with one or more classes of the first  
18 schema in response to determining, based on the automatic comparison, the one or more  
19 classes of the first schema with which the at least a portion of the target data should be  
20 associated, the target data being associated with the classes of the first schema using one or  
21 more pointers to the target data.

1           36. (Currently amended) A method for associating target data with a product  
2 classification schema, comprising:

3           accessing ~~the~~ a first product classification schema, the first schema comprising a  
4 taxonomy comprising a hierarchy of classes into which products may be categorized, the first  
5 schema further comprising ontologies associated with one or more of the classes, each  
6 ontology comprising one or more product attributes;

a<sup>5</sup> 7           accessing the target data to be associated with the first schema, the target data  
8 organized according to a second product classification schema;

9           determining one or more classes of the first schema with which at least a portion of  
10 the target data should be associated based on a an automatic comparison, without translating  
11 the target data from the second schema to the first schema, between the target data and the  
12 product attributes of the ontologies of the first schema or between the target data and values  
13 for one or more of the product attributes of the ontologies of the first schema, the values  
14 being stored in one or more seller databases and identified by one or more pointers associated  
15 with one or more classes of the first schema; and

16           associating the at least a portion of the target data with one or more classes of the first  
17 schema in response to determining, based on the automatic comparison, the one or more  
18 classes of the first schema with which the at least a portion of the target data should be  
19 associated, the target data being associated with the classes of the first schema using one or  
20 more pointers to the target data.

1           37. (Currently amended) Software for associating target data with a product  
2 classification schema, the software being embodied in a computer-readable medium and  
3 when executed operable to:

4           access ~~the~~ a first product classification schema, the first schema comprising a  
5 taxonomy comprising a hierarchy of classes into which products may be categorized, the first  
6 schema further comprising ontologies associated with one or more of the classes, each  
7 ontology comprising one or more product attributes;

a<sup>5</sup> 8           access ~~the~~ target data to be associated with the first schema, the target data organized  
9 according to a second product classification schema;

10           determine one or more classes of the first schema with which at least a portion of the  
11 target data should be associated based on a an automatic comparison, without translating the  
12 target data from the second schema to the first schema, between the target data and the  
13 product attributes of the ontologies of the first schema or between the target data and values  
14 for one or more of the product attributes of the ontologies of the first schema, the values  
15 being stored in one or more seller databases and identified by one or more pointers associated  
16 with one or more classes of the first schema; and

17           associate the at least a portion of the target data with one or more classes of the first  
18 schema in response to determining, based on the automatic comparison, the one or more  
19 classes of the first schema with which at the least a portion of the target data should be  
20 associated, the target data being associated with the classes of the first schema using one or  
21 more pointers to the target data.

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